

291
p120 3.2

HW

p120-121 13, 14, 17, 19, 23, 24, 29, 31, 34
39, 40, 45-47

13. $2j - 3k = 3$

$j + k = 14$

$j = 14 - k$

$2(14 - k) - 3k = 3$

$28 - 2k - 3k = 3$

$28 - 5k = 3$

$-5k = -25$

$k = 5$

$j = 9$

$(9, 5)$

14. $2r + s = 11$

$6r - 2s = -2$

$s = 11 - 2r$

$6r - 2(11 - 2r) = -2$

$6r - 22 + 4r = -2$

$10r = 20$

$r = 2$

$s = 11 - 2(2) = 7$

$(2, 7)$

17. $6c + 3d = 12$

$2c = 8 - d$

$-2c + 8 = d$

$6c + 3(-2c + 8) = 12$

$6c - 6c + 24$

$24 \neq 12$

\emptyset

19. $u + v = 7$

$2u + v = 11$

$-u - v = -7$

$u = 4$

$v = 3$

$(4, 3)$

23. $2c + 6d = 14$

$2(\frac{1}{2}c - 3d = 8)$

$2(10) + 6d = 14$

$6d = -6$

$d = -1$

$(10, -1)$

$2c + 6d = 14$

$c - 6d = 16$

$3c = 30$

$c = 10$

$$24. \begin{aligned} 3s + 2t &= -3 \\ -3(s + \frac{1}{3}t) &= -4 \end{aligned}$$

$$\begin{aligned} 3s + 2t &= -3 \\ -3s - 1t &= 12 \\ \hline t &= 9 \\ s &= -7 \end{aligned}$$

$$\boxed{(-7, 9)}$$

$$29. \begin{aligned} 2p &= 7 + q \\ 6p - 3q &= 24 \end{aligned}$$

$$\begin{aligned} q &= 2p - 7 \\ 6p - 3(2p - 7) &= 24 \\ 6p - 6p + 21 &= 24 \\ 21 &\neq 24 \end{aligned}$$

$$\boxed{\emptyset}$$

$$31. \begin{aligned} 3u + 5v &= 6 \\ -3(2u - 4v) &= -7 \end{aligned}$$

$$\begin{aligned} 6u + 10v &= 12 \\ -6u + 12v &= 21 \end{aligned}$$

$$22v = 33$$

$$v = \frac{3}{2}$$

$$2u - 4(\frac{3}{2}) = -7$$

$$2u - 6 = -7$$

$$2u = -1$$

$$u = -\frac{1}{2}$$

$$\boxed{\left(-\frac{1}{2}, \frac{3}{2}\right)}$$

$$34. \begin{aligned} f &= 6 - 2g \\ \frac{1}{6}f + \frac{1}{3}g &= 1 \end{aligned}$$

$$\begin{aligned} \frac{1}{6}(6 - 2g) + \frac{1}{3}g &= 1 \\ 1 - \frac{1}{3}g + \frac{1}{3}g &= 1 \\ 1 &= 1 \end{aligned}$$

∞ # solns
on line $f = 6 - 2g$

$$39.$$

K # members rent ski

b # members rent boards

$$K + b = 28$$

$$16k + 19b = 478$$

$$40. -16k - 16b = -448$$

$$3b = 30$$

$$b = 10$$

10 rented boards
18 rented skis

45. T # T/F quest
M # mult ch. quest

(1)

$$2T + 4M = 100$$

$$M = 2T$$

46. $M + 4M = 100$

$$5M = 100$$

20 mult. ch. q

$$M = 20$$

10 True/False

$$T = 10$$

47. $10(1) + 20(1.5)$

$$10 + 30 = 40 \text{ yrs} < 45$$

(1)

(1)